REMARKS

Applicant graciously appreciates the Office's attention to the instant application. In view of the following remarks, Applicant respectfully requests reconsideration and allowance of the subject application. This amendment is believed to be fully responsive to all issues raised in the December 12, 2003 Office Action.

The Specification

The specification is amended. In particular, the paragraph commencing at page 17, line 20 has been amended to correct a typographical error which recited the mount 192 rather than the mount 190. The Abstract has also been amended to bring the word count to 150 words or less (see, e.g., MPEP §608.01(b)).

The Office also asserted that part of the subject matter of claim 46 was not described in the specification, citing 37 CFR § 1.75(d)(1) and MPEP § 608.01(o). In particular, the Office stated that the claimed subject matter of "'*the first mount restrains the tube so to allow the transfer of torsional loads from the tube via the motion limiter to the load bearing member*' in claim 46 was not described in the specification" (OA 12/19/03 at page 2). 37 CFR § 1.75(d)(1) states in relevant part:

> (1) The claim or claims must conform to the invention as set forth in the remainder of the specification and the terms and phrases used in the claims must find clear support or antecedent basis in the

description so that the meaning of the terms in the claims may be ascertainable by reference to the description.

Applicant respectfully submits that the objected to subject matter of claim 46 is adequately supported in the specification and therefore meets the requirements of § 1.75(d)(1). For example, at page 5, lines 21-28, the specification recites:

The mount restrains the duct so to transfer, from the duct to the load bearing member, loads aligned substantially with the longitudinal axis of the duct as well as torsional and shear loads. These loads can include all mechanical loads caused by thermal differentials, air pressure, and other mechanical sources. The mount can also be adjustable to allow the duct to expand separately from the load bearing member. This keeps any differential thermal expansion, occurring between the duct and the load bearing member, from causing damage thereto. The mount can include a motion limiter, a limiter channel, a retainer and a retainer fastener.

Hence, Applicant submits that the specification adequately links mechanics and function of the objected to subject matter of claim 46. Consequently, Applicant respectfully requests that the objection to claim 46 be removed.

The Office also objected to claim 46 under 35 U.S.C. § 112, ¶1 stating that "'*the first mount*' was not described in the specification in such a way as to enable one skilled in the art to use the first mount to transfer torsional loads

from the tube via the motion limiter to the load bearing member. It appears in Figure 5, that the motion limiter (192) moves only in up and down directions". Applicant respectfully disagrees. For example, as shown in Figure 5, the motion limiter (192) may move in an up or a down direction, contact a surface of the mount, and then transfer torsional loads from the tube to the load bearing member. In another example, the motion limiter may expand outward in a radial direction upon an increase in temperature and thereby contact a surface of the load bearing member. Once in contact, the motion limiter can transfer torsional loads from the tube to the load bearing member. Applicant further submits that while the particular cross-sectional view of Figure 5 does not show the motion limiter 192 in contact with the load bearing member, another cross-section may optionally show contact, i.e., there is no limitation in the specification and the quoted text at page 5, lines 21-28 supports this contention. Consequently, Applicant submits that claim 46 complies with the requirements of 35 U.S.C. § 112, ¶1.

The Claims

As explained above, claims 27 and 47 are currently amended, claims 35-37, 41-44 and 51 are objected to as being dependent on a rejected base claim and claim 52 is allowed. Accordingly, claims 27-28, 30-32, 34-37, 41-46, 47-48 and 50-52 are pending.

Claim Rejections Under 35 USC §102(b)

In the Office Action dated December 19, 2003 the Office rejected claims 27, 28, 30, 31, 32, 34, 45 and 46 under 35 USC §102(b) as being anticipated by Mather et al. (US 4,151,828), referred to herein as the Mather reference.

Under 35 USC §102, a prior art patent must disclose each and every limitation found in the claims, either expressly or inherently. See, e.g., Rockwell intern. Corp. v. U.S., 147 F.3d 1358, 1363 (Fed. Cir. 1998). Applicant respectfully submits that the Mather reference does not disclose each and every limitation found in the rejected claims.

Claim 27

Claim 27, as currently amended, recites in relevant part:

a tube including a motion limiter attached thereto and extending radially therefrom to limit upward or downward axial motion of the tube, wherein at least a portion of the tube extends into the core and is capable of being in contact with the core to transfer loads between the tube and the core, to provide support to the core and to increase the stiffness of the core, and wherein the tube is positioned at least adjacent to the heat exchange portion of the core

Applicant chose to insert the words "*attached thereto*" to more clearly and particularly identify the claimed subject matter. The purpose of this amendment was not to narrow the scope of the claim as such the purpose is unrelated to the Office's rejection of claim 27 or the Mather reference.

Applicant submits that the Mather reference does not disclose, expressly or inherently, the motion limiter of claim 27. In particular, the Mather reference does not recite "*a tube including a motion limiter . . . extending radially therefrom*".

The Mather reference pertains to a tube 21 in a vacuum jacket 22. The tube 21 includes a pair of bushings 23. The bushings 23 are separated from the tube 21 by an elastomeric o-ring 24 seal; the tube 21 can travel with respect to each of the elastomeric o-ring seals 24 and hence move separately from the bushings 23. As such, the elastomeric o-rings 24 and bushings 23 do not form or operate as a motion limiter extending radially from the tube 21. Operation of the tube 21, elastomeric o-ring seals 24 and bushings 23 with respect to the vacuum jacket 22 is explained at col. 6, lines 13-19:

> When the sun's rays strike the heat absorbing tube 21 it will tend to lengthen with respect to the outer jacket 22. Doing so, the tube 21 will travel slightly within the seals 24 and the spaces between the collars 29 and the bushings 23 will increase slightly. The bushings 23 will maintain close contact with the ends of the vacuum jacket due to the action of atmospheric pressure.
>
> In addition to the longitudinal expansion, the tube 21 and the bushings 23 will expand diametrically, tending to stress the circumferential integrity of the ends of the jacket 22. The tolerances which we allow between the outside diameter of the bushing 23 and the inside diameter of the jacket,

> together with the specifications of the groove 27 and the o-ring type seal 26 are selected so that the incipient hoop stresses are harmlessly dissipated in deformation of the elastomeric o-ring type seal 26.

Mather reference at col. 6, lines 13-28 (emphasis added).

Indeed, as the underlined text indicates, the bushings 23 are meant to maintain close contact with the ends of the vacuum jacket 22 due to a pressure differential (vacuum and atmospheric pressure) and any stress due to diametric expansion of the tube 21 and the bushings 23 are harmlessly dissipated in deformation of the elastomeric o-ring type seal 26 such that the stress does not compromise the circumferential integrity of the ends of the jacket 22. Further, the elastomeric o-ring seal 24 does not limit upward or downward motion of the tube 21, i.e., the tube 21 can move longitudinally while the seal 24 and bushing 23 remain stationary.

Applicant submits that the Mather reference does not disclose expressly or inherently the subject matter of claim 27 and it does not enable the subject matter of claim 27. For at least the foregoing reasons, Applicant submits that claim 27 is patentable over the Mather reference and that the rejection is traversed.

Claims 28, 30, 31, 32, 34, 45 and 46

Claims 28, 30, 31, 32, 34, 45 and 46 depend on claim 27. Applicant submits that these claims are patentable over the Mather reference for at least the same reasons as claim 27. Applicant submits that the rejection based on

the Mather reference is traversed and that the claims 27, 28, 30, 31, 32, 34, 45 and 46 are allowable.

Claim Rejections Under 35 USC §102(e)

In the Office Action dated December 19, 2003 the Office rejected claims 47, 48 and 50 under 35 USC §102(e) as being anticipated by Nakamura et al. (US 6,283,199), referred to herein as the Nakamura reference.

Under 35 USC §102, a prior art patent must disclose each and every limitation found in the claims, either expressly or inherently. See, e.g., Rockwell Intern. Corp. v. U.S., 147 F.3d 1358, 1363 (Fed. Cir. 1998). Applicant respectfully submits that the Nakamura reference does not disclose each and every limitation found in the rejected claims.

Claim 47

Claim 47 recites in relevant part:

a tube having a length and including a motion limiter extending radially therefrom to limit upward or downward axial motion of the tube, wherein at least a portion of the tube extends adjacent to more than one of the heat exchange members and is capable of being in contact with the heat exchange members to transfer loads between the tube and the heat exchange members, to provide support to the core and to increase the stiffness of the core.

Applicant currently amended, claim 47 now recites a tube that "*extends adjacent to more than one of the heat exchange members*". Applicant submits that the Nakamura reference does not disclose, expressly or inherently, the motion limiter or the tube of claim 47. In particular, the Nakamura reference does not recite a tube that "*extends adjacent to more than one of the heat exchange members*".

The Nakamura reference describes "an inlet/outlet pipe portion 1" that does not extend adjacent to more than one heat exchange member. Figure 5 of the Nakamura reference is typical in that it illustrates an inlet/outlet pipe portion 1 that extends past a casing wall 5 to contact an upper end plate 15 of a core 3. Therefore, the inlet/outlet pipe portion 1 does not extend adjacent to more than one heat exchange member or layer of the core.

For at least the foregoing reason, Applicant submits that claim 47 as currently amended is patentable over the Nakamura reference and, as such, the rejection traversed.

Claims 48 and 50

Claims 48 and 50 depend on claim 47. Applicant submits that these claims are patentable over the Nakamura reference for at least the same reasons as claim 47. Applicant submits that the rejection based on the Nakamura reference is traversed and that the claims 47, 48 and 50 are allowable.

Objected To and Allowable Subject Matter

Claims 35-37, 41-44 and 51

In the Office Action dated December 19, 2004, the Office indicated that claims 35-37, 41-44 and 51 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Reasons given included:

> the prior art either taken singularly or in combination fails to disclose at least a portion of the tube extends into the core having a layering heat exchange members with a motion limiter extending radially from the tube as in claim 41 and a mount positioned between the end of the tube and the core wherein the end of the tube is positioned with the core as in claim 53.

OA 12-19-03 at page 9.

While this response does not represent these claims or add new claims, Applicant may represent and/or add new claims directed to the subject matter of claims 35-37, 41-44 and 51 as they stood prior to any amendment and/or argument presented in this response.

Claim 52

Applicant presents no amendment herein and/or argument herein germane to allowed independent claim 52.

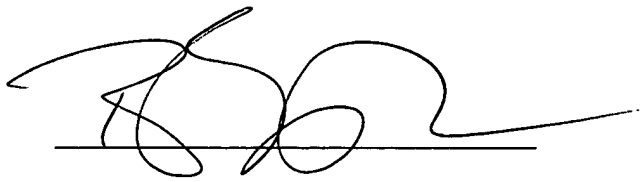
Conclusion

Pending claims 27-28, 30-32, 34-37, 41-46, 47-48 and 50-52 are pending are believed to be in condition for allowance. Applicant respectfully requests reconsideration and prompt issuance of the present application. Should any issue remain that prevents immediate issuance of the application, the Examiner is encouraged to contact the undersigned attorney to discuss the unresolved issue.

Respectfully Submitted,

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